

Contact: [C. Scholl](#)

PREVIOUS ISSUES

December 2013

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Quote of the Month: "The most beautiful thing we can experience is the mysterious. It is the source of all true art and science." - Albert Einstein

A WORD FROM THE:

Administration

Accelerator Div.

ES&F Div.

Acc. R&D Div.

Operations

NOTE FROM OUR CHAIR: Thomas Roser



I hope everybody had wonderful Holiday celebrations and a great start of the New Year. Congress is belatedly working on this year's budget and finally one can be somewhat hopeful that there will be a federal budget after several years of "continuing resolutions", which meant that our budget has been shrinking by 2 - 3% every year. If Congress passes a budget we might be able to run RHIC from the beginning of February until the end of June.

In the meantime BLIP has started operation and the pre-cooling of the RHIC rings also started. As every year there are many installation efforts that need to be completed before the start of the run. New longitudinal kickers and pick-ups for the RHIC stochastic cooling system and the new superconducting 56 MHz storage rf system will improve the luminosity for the planned gold-on-gold physics run this year. The electron lenses will be installed for commissioning with beam and the electron gun for the Coherent electron Cooling experiment is being installed for testing during the run. With all these activities going on I urge everybody to be particularly careful and aware about your own safety and the safety of your co-workers.

► Arrivals/Departures

 Safety Stats

DID YOU KNOW??

Check out who received an employee Service Award this year! 2014 Collider-Accelerator Dept. employees who received a [Service Awards](#). Last year's Service Awards are listed [here](#). 2012 Service Awards are listed [here](#).

Check out Steve Bellavias' current Photos! [Galaxy pair](#)

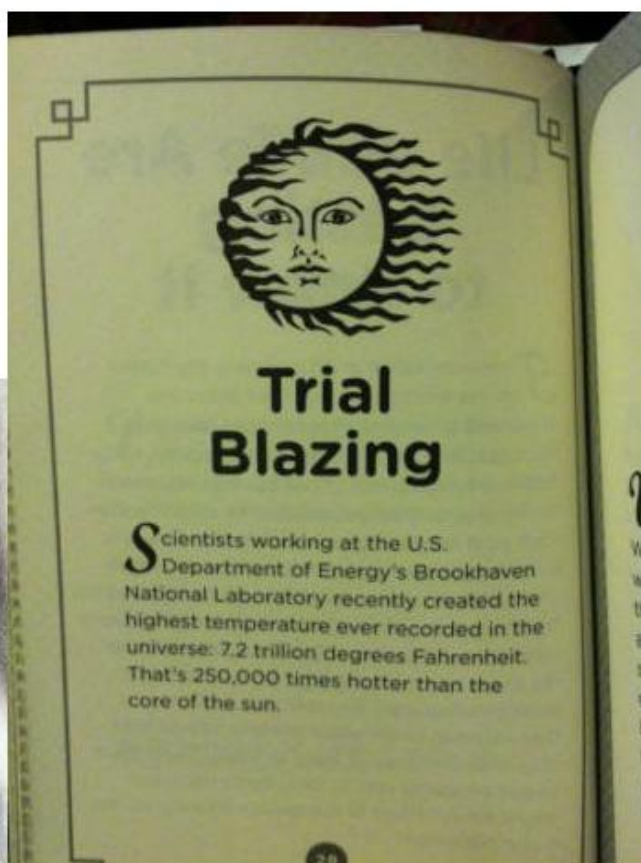
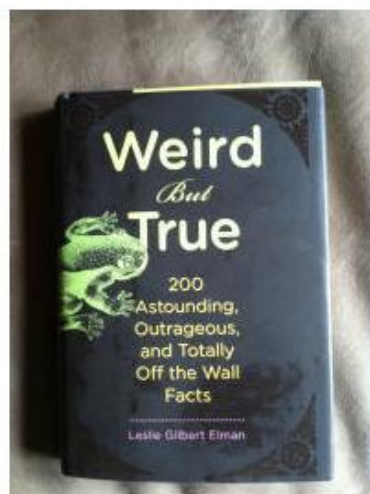
EVENTS/SEMINARS...



Check out the [BNL Calendar](#) for upcoming events & Seminars or the [Upcoming Conferences & Workshops](#) page for workshops and Conferences happening at BNL.

Adopt a Family and United Way was a great success this year! We collected 3 big boxes full of clothing, toys, etc. Click [here](#) to view some pictures.

Dan Wilson picked up a book "Weird but True" while up in Boston and found something interesting! A small blurb mentioning BNL!



Jan. 21 - (Bldg 510 LSR | 3:30) Physics Colloquium, "Journey in time through the universe from a visit to the quark-gluon plasma era", Presented by Johann Rafelski (U. of Arizona at Tuscon)

Jan. 23 - (911A Snyder | 9:00am) All-employee Event "Coffee & Conversation" - Doon Gibbs

IN OTHER NEWS...

On-Demand Vaccines Possible With Engineered Nanoparticles ~ University of Washington engineers hope a new type of vaccine they have shown to work in mice will one day make it cheaper and easy to manufacture on-demand vaccines for humans. [Read more..](#)

New Technique Targets Specific Areas of Cancer Cells With Different Drugs ~ "In testing on laboratory mice, our technique resulted in significant improvement in breast cancer tumor reduction as compared to conventional treatment techniques.... [Read more](#)

New Solar Cell Material Acts as a Laser As Well ~ [Read about it..](#) The family of crystals known as perovskites could be used to make cheap lasers.

WHAT'S GOING ON IN OUR NEIGHBORHOOD?

Interested in Cycling? No Cycling Events at this time

Interested in Running or Walking? Check out the [lirunning August Calendar](#) for the following events: No Events at this time

For the Kids: Disney on Ice; Monster Jam; Harlem Globetrotters (February) @ [The Nassau Coliseum](#).

DAY AT THE VINEYARDS...

Macari Vineyard ~ [MATTITUCK] No upcoming events at vineyard.

Duckwalk North ~ [SOUTHOLD] No Events Posted

Duckwalk South ~ [WATER MILL] No Events Posted

Castello di Borghese Vineyard & Winery ~ [CUTCHOGUE] ** Vineyard Tours & Wine Tastings Every Thursday & Sunday @1pm & FREE Jazz Every Saturday (2-4) with Marguerite Volonts**

Stony Brook Events:

Hot Cocoa And Marshmallows: Jan. 22~March 5 (10:30~) Ages 3~5 listen to a story while enjoying a cup of hot cocoa. 3\$ per Person

Chinese New Year Celebration ~ Jan. 26 (1:30am~ 3:30pm) Make this Chinese New Year one to remember when you help us welcome the Year of the Horse with drumming, dancers and a nine-foot lion! Advance reservations are required and include a Year of the Horse craft activity immediately following the performance.

Nassau Coliseum ~

Upcoming shows: JayZ; Brad Paisley, Demi Lovato, Miley Cysrus & More

Long Island Boast Show ~ February 7~9

Spring Craft Beer Festival ~ March 22

Martha Clara Vineyards - [RIVERHEAD] ~ **Live Music every weekend**

Palmer Vineyards - [RIVERHEAD] No Events Posted

Pindar Vineyards - [PECONIC] ~ No Events Posted

Baiting Hollow Farm Vineyard ~ [CALVERTON] *Music every Sat & Sun from (2~6)*

Paumanok Vineyards ~ [AQUEBOGUE] No Events Posted
August 5~15, 2014 ~ Paumanok Mediterranean Wine Cruise

DEPARTURES: Farewell, you will surely be missed..

John Guercio- (rf) - last day was Friday, December 20, 2013 - Retiring

Vladimir Zajic - (Preinjector Systems) - Last day was Wednesday, December 25, 2013 - Retiring

Wayne Hulse - (IFM) - Last day is December 31, 2013- Retiring

Rocco Tuccio - (Machine Operations) - Last day was January 2, 2014 - Retiring

Bert Haug - (Design & Doc.) - Last day is was January 3, 2014 - Retiring

Paul Ziminski - (Instrumentation Systems) - Last day was January 6, 2014 - Retiring

Cleveland Dodge - (BLIP) - Last day is January 31, 2014 - Retiring

John Nicolellis - (CES) - Last day is January 31, 2014 - Retiring

Guest Notices:

Chengyang Tan - Last Day was December 2, 2013

NOTE FROM OUR ADMINISTRATION: Stephanie LaMontagne-McKeon



As calendar year 2014 opens, RHIC begins to cool to 45° K in preparation for Run 14, NSRL has concluded its first decade of operations with high marks from NASA and the Tandem van de Graaff facility begins its third year of stand-alone operations. The Isotope Research and Production Program at BNL also remains vital with strong support from DOE for research and development activities. Additionally, significant facility upgrades are in process at RHIC, NSRL and BLIP.

Although current budget guidance suggests a RHIC Operating budget flat with FY 2013, management remains optimistic that a modest increase in funding will be provided to support RHIC Run 14. Consistent with this optimism, technical staff aggressively pursue the programmatic milestones established with under more auspicious budget assumptions. And so, we continue to spend at a rate that supports preparations for Run 14 but may not support a run of any length. Accordingly, please keep in mind that without an increase in funding, material purchases may be severely constrained on the back end of the year. Spend wisely and make every dollar count!

NOTE FROM ACCELERATOR R&D DIVISION: Ilan Ben-Zvi



Please check back..

NOTE FROM OUR ACCELERATOR DIVISION: Wolfram Fischer



BLIP operation started in December and is under way. In preparation for the RHIC Run both the Booster and AGS will start the week of January 13th, which is also the week of the RHIC Dry Run. The Dry Run will test all systems to the extent possible without beam. The start of the 4K cool-down of RHIC Run-14 is scheduled for February 3rd, 2014. This will still allow for 22 cryo-weeks before the end of June.

The catalog of all Technical Notes is <http://www.rhichome.bnl.gov/AGS/InternalReports.html>, and it is linked from both the Department and Accelerator Division home pages.

NOTE FROM OUR EXPERIMENTAL SUPPORT & FACILITIES DIVISION: Phil Pile



We are still holding to the schedule for a 3 February start for cool down to 4 deg K and do not anticipate this date will slip. The run plan remains the same as I reported last month with a short low energy gold-gold run followed by a long full energy gold-gold run. If the budget allows, we plan to run through June and with this we may have time left for another short run with beams to be determined. Our final budget should be known in a week or so. The new gold "fixed target" has been installed inside the STAR beam pipe. Both STAR and PHENIX will be ready for first collisions with new/enhanced silicon vertex trackers.

BLIP and the Building 801 Target Processing Lab (TPL) received first beam from the LINAC on 17 December. The first RbCl target array was inserted into the beam on 20 December, on schedule. A lot of effort has went into remediation of findings from the September DraxImage and Bracco Diagnostics (Strontium-82 customers) audit, and the effort will continue into the run. The first research irradiation is planned for 13 January. A Thorium foil will be irradiated at 200 MeV for about a day and then sent to ORNL for processing. A fresh RbCl target array will be installed and will run concurrent with the Thorium irradiation. The new LINAC beam raster project for BLIP has been given approval from DOE to proceed. The goal for this project is to be operational for the 2016 BLIP run. Meeting this schedule will be a challenge.

NASA sponsored NSRL experiments for the fall began on 7 October and ran through 15 November followed by a one week run in support of the National Reconnaissance Office (NRO). The annual review of NSRL operations by NASA was held on 11 December. The review went well, as we have come to expect.

We expect to begin NSRL experiments later this year and run through June.

NOTE FROM OPERATIONS: Paul Sampson



Shutdown is wrapping up in the injectors this month, while major works in RHIC continue. LINAC continues to run for BLIP. EBIS and Booster will begin to run Au beam for RHIC setup on January 14th.

In RHIC, major focus is on installation of the 56 MHz SRF Cavity, while completion of several other large projects proceeds. The e-lens installation is in its final stages and should be nearly complete before the end of the month. New longitudinal stochastic cooling kickers have been located in the Blue ring and are expected to be in yellow shortly. Repair of the Blue longitudinal damper has been completed and installation of the new transverse dampers is expected later in the month. Installation for CeC in IR 2 continues both inside and outside of the ring. The laser "hut" has been delivered and will be permanently installed late in the month. Maintenance, repair and upgrades to other major systems most notably Air Conditioning, also continues.

Work on the EBIS source continues along with setup for Au beam delivery mid month. Progress continues with the laser ion source installation.

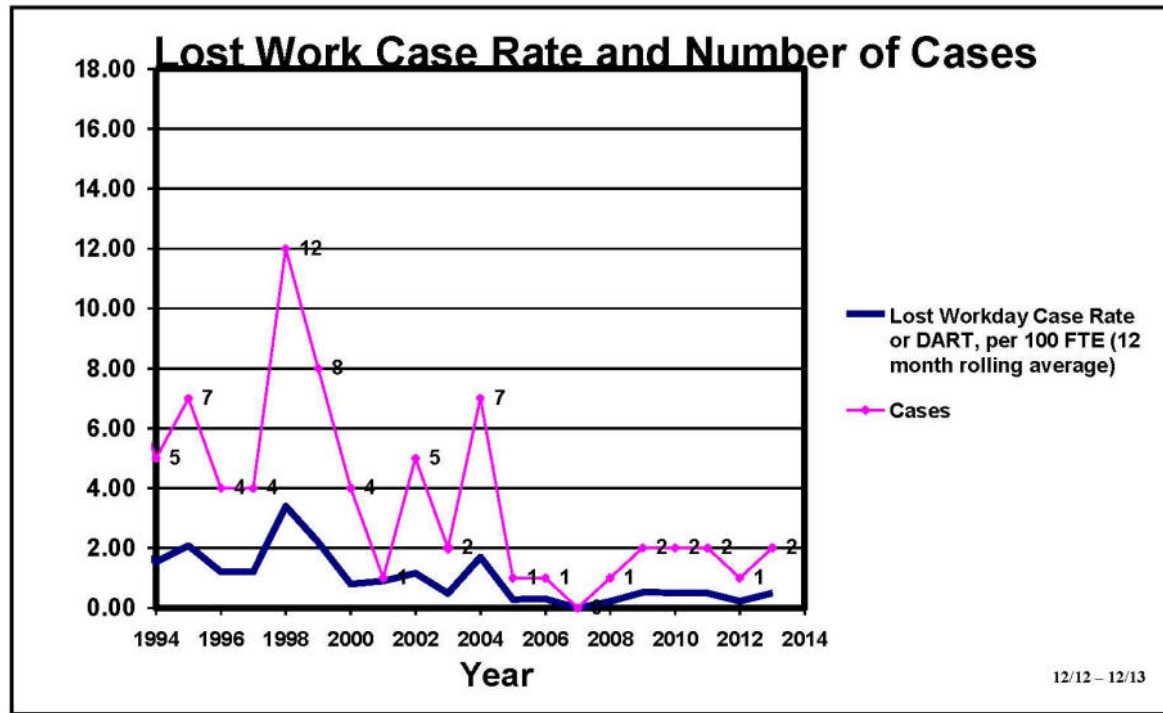
In the AGS, the D5 eIPM has been removed and replaced with a straight vacuum section. It will be installed during the run, while welding of the outriggers for the D15 are expected to be before AGS startup on the 16th.

Other CAD area infrastructure repairs, including electrical distribution repair, maintenance and upgrades, also are continuing on schedule.

The CAD CATV system display includes daily updates including Testing, power disruptions and outages as well as important dates. This information can also be seen on the web at [RHIC Broadcast](#).

To view a list of the approved work for maintenance days or the shutdown, go the [Job Request System](#) and select the appropriate date. This link is behind the firewall and requires privileges to view.

For schedule updates see: [This Week, which can be viewed by all](#).



C-AD Occupational Injury Statistics

For Year 2013 For Year* 2014

First Aid Cases	5	1
Recordable Cases	3	0
Lost Work Cases	2	1

* Calendar Year through 12/13

PHOTOS BY: STEVE BELLAVIA

It was very cold the night of Dec. 31 (around 25 degrees), but worth the effort to get this galaxy pair (actual trio, M81, M82 and NGC 3077).

This is Steve's first "real" tracking astro-photograph, using an old mount someone gave him and his little 80mm refractor.



Photo Information for M81-M82-NGC3077, 12-31-2-013

- Camera: Canon EOS T3
- Scope: Orion 80mm f/5 achromatic refractor (with a 9x50 finderscope to center object)
 - Mount: A Celestron CG5/CGEM (No computer or guidescope capability).
 - Total of 62, 30-second long exposures, ISO 1600
 - 5 dark frames, 5 bias frames, 1 flat.

Canon Digital Photo Professional to convert all the Raw files into 16 bit TIFF files.

Loaded the light, dark, bias and flat TIFF files into Deep Sky Stacker 3.3.2.

It took 49 of the 62 light frames, registered and stacked them.

Some post-processing using Canon Digital Professional. Cropped about 60% of total field